

REMARKS

Claims 1, 3-10, and 12-20 are now pending in the application. Claims 1, 4, 10, 13, 19, and 20 are currently amended. Claims 2 and 11 are cancelled by this amendment. No claims are newly added. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTIONS UNDER 35 U.S.C. §§ 102 AND 103

Claims 1, 3, 4, 10, 12, 13, 19, and 20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Kondo et al. (U.S. Pat. No. 7, 310,373 B2; "Kondo"). This rejection is respectfully traversed.

Claims 2, 5-9, 11, and 14-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kondo in view of Kato (U.S. Pat. No. 5,701,164 A; "Kato"). This rejection is respectfully traversed.

All independent Claims 1, 4, 10, 13, 19, and 20 have been amended so as to include the limitations (1) to (4) listed below.

(1) "using layer information on a layer to which a frame to be encoded belongs" (Claims 1, 4, and 19) and "using layer information on a layer to which a frame to be decoded belongs" (Claims 10, 13, and 20)

These limitations are based on, for example, paragraph 39, 40, 106, and 107 of the Description (see, for example, the following phrases).

Also, in the case of scalable encoding, layer information belonging to the frames to be encoded may be utilized as a reference for selecting motion vectors.

When encoding each frame, the motion vectors stored in the memory for the layers belonging to that frame may then be selected.

It is also possible to apply the present invention to temporal scalable encoding with the constitution of the embodiment shown in FIGS. 26 and 27.

With regard to the motion vector stored in the motion vector storage memory 107, similarly to the aforementioned fifth embodiment, the first reference picture designation information is associated with the first motion vector, and the second reference picture designation information is associated with the second motion vector.

(2) "layers that are provided for temporal scalable encoding, multi-view encoding, or stereo encoding"

This limitation is based on, for example, paragraphs 40, 106, and 109 of the Description (see, for example, the following phrases).

in the case of performing temporal scalable encoding using the base layer and the enhancement layers...

It is also possible to apply the present invention to multi-view encoding and stereo encoding with the constitution of the embodiment... In stereo encoding adopted for the MPEG-2 multi-view profile, a method similar to the aforementioned temporal scalable encoding is applied having the video of one view (view A) serve as the base layer, and the video of another view (view B) serve as the enhancement layer.

It is also possible to apply the present invention to multi-view encoding and stereo encoding with the constitution of the embodiment shown in FIGS. 26 and 27.

(3) "for each of layers..."

This limitation is based on, for example, paragraphs 106 to 108 of the Description, which describe that selection of a motion vector and setting of correspondence relation between motion vectors and reference picture designation information are performed for each layer.

(4) "the plurality of motion vectors being selectable for the layer determined by the layer information"

This limitation is based on, for example, paragraphs 107 and 109 of the Description.

Independent Claims 1, 10, 19, and 20 have also been amended so as to include the following limitation (5), which is recited in Claim 2 and Claim 11. Therefore, Claims 2 and 11 have been cancelled without prejudice or disclaimer.

(5) "in accordance with position information of areas within a screen"

Independent Claims 1, 4, 10, 13, 19, and 20

Applicants believe that the invention recited in the independent claims is distinguishable from Kondo. However, in order to facilitate the prosecution, these claims have been amended as described above.

Kondo and Kato neither disclose nor suggest the foregoing limitations (1) to (4). For example, with respect to the phase "layer", Kondo merely mentions a hierarchical structure that includes a stream layer, GOP layers, picture layers, and slice layers (see column 3, second paragraph of Kondo). Kato fails to even mention layers.

With respect to the foregoing limitation (5), which is recited in original Claims 2 and 11, the Examiner points out column 16, lines 56 to column 17, line 15 of Kato and asserts that Kato discloses a system for macroblock coding including difference between motion vectors, wherein block matching is performed by comparing portions of a current frame to a search area in a reference frame in order to determine a minimum difference so as to select a vector from multiple candidates (page 4, last paragraph of

the Office Action).

However, this portion of Kato merely discloses the following matters:

(1) Motion prediction of pixels in a picture to be currently coded is performed using block matching of a block pixel signal in the picture to be currently coded and a past picture or a future picture to which reference is made.

(2) Each block position in a reference picture in which a predictive error in block matching becomes minimum is detected, and a motion vector corresponding to that position is delivered to a motion compensating circuit 18.

In other words, the relevant portion of Kato merely mentions the technical idea of generating a single motion vector that provides the minimum predictive error. Therefore, it is clear that Kato neither discloses nor suggests the technical idea of selecting a motion vector from a plurality of motion vectors that have been stored in advance in accordance with position information of areas within a screen.

In addition, the present invention provides the following advantages, which are recited in paragraphs 108, 109, and 111 of the Description. Such advantages cannot be obtained from Kondo in view of Kato.

With respect to temporal scalable encoding:

For the base layer, the frame time interval tends to be long, and for the enhancement layer the frame time interval tends to be short, and so thus being able to select different motion vectors is effective.

With respect to multi-view encoding and stereo encoding:

... a different motion vector can be selected for each view. This is effective for cases when the motion information differs for each view.

Dependent Claims 3, 5-9, 12, and 14-18

Applicants believe that these claims are also patentable at least by virtue of their dependency on the independent claims.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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